NIH Library

Instructional Services
presents

PubMed Searching Guide

http://nihlibrary.nih.gov/pubmed.htm

Training Schedule: http://nihlibrary.nih.gov/seminars/seminarschedule.htm

Course Objectives

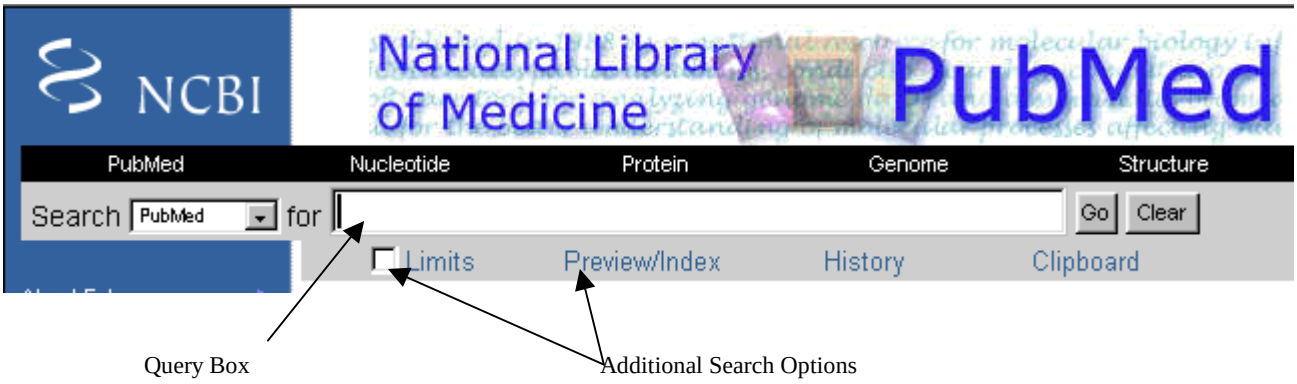
1. Find references on a specific topic, by a specific author or in a specific journal
2. Apply limits such as language, age groups and publication type to search results
3. Use LinkOut while you search to obtain the actual article from select journals
4. Use MeSH (**Me**dical **S**ubject **H**eadings) Browser to identify indexing terms
5. Use Single Citation Matcher to verify a reference
6. Order photocopies of articles from the NIH Library using PubMed's LoansomeDoc

PubMed Description

The PubMed search system provides access to the PubMed database of bibliographic information, which is a compilation of the National Library of Medicine's (NLM) MEDLINE, PreMEDLINE and HealthSTAR as well as publisher-supplied citations. MEDLINE is NLM's premier database covering the fields of medicine, nursing, dentistry, veterinary medicine, the health care system, and preclinical sciences.

Searching PubMed

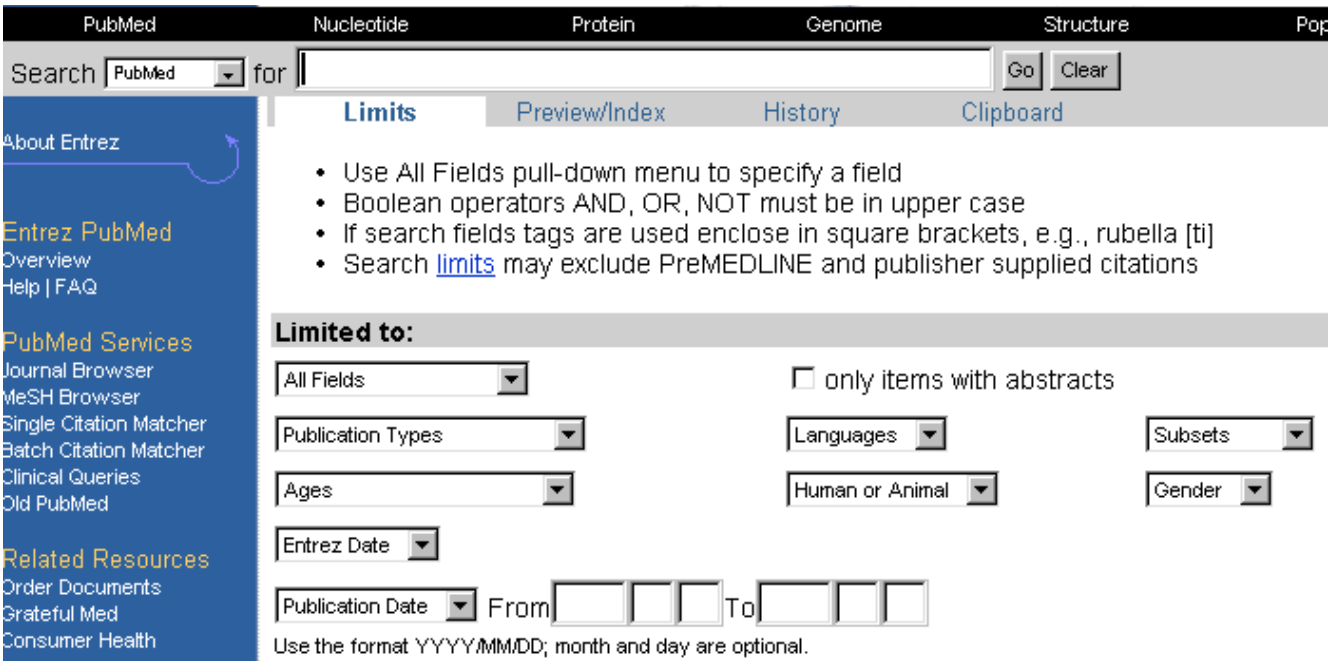
To search PubMed, enter search terms in the query box. The Features bar directly beneath the query box provides access to additional search options, Limits and Index. Also, available from the Features bar are the History and Clipboard for use with your search results. The PubMed query box and Features bar are available from every screen. You do not need to return to the homepage to enter a new search.



Search Options

Limiting

Click on "Limits" in the Features bar under the search box to be able to limit your search to specific age group, gender, or human or animal studies.



"Limits" also allows you to restrict to articles published in a specific language, and to specific types of articles such as review articles. You can limit by either Entrez or Publication Date. And lastly, you may limit your retrieval to a specific subset of citations within PubMed, such as AIDS-related citations or in process citations, i.e., PreMEDLINE.

A check mark in the box next to Limits indicates if limits have been selected. If you select a limit and run a search , the limits in effect will appear in a yellow bar above the Display button when viewing search results. To turn off the limits before you run your next search, click on the box to remove the check.

Using Preview/Index

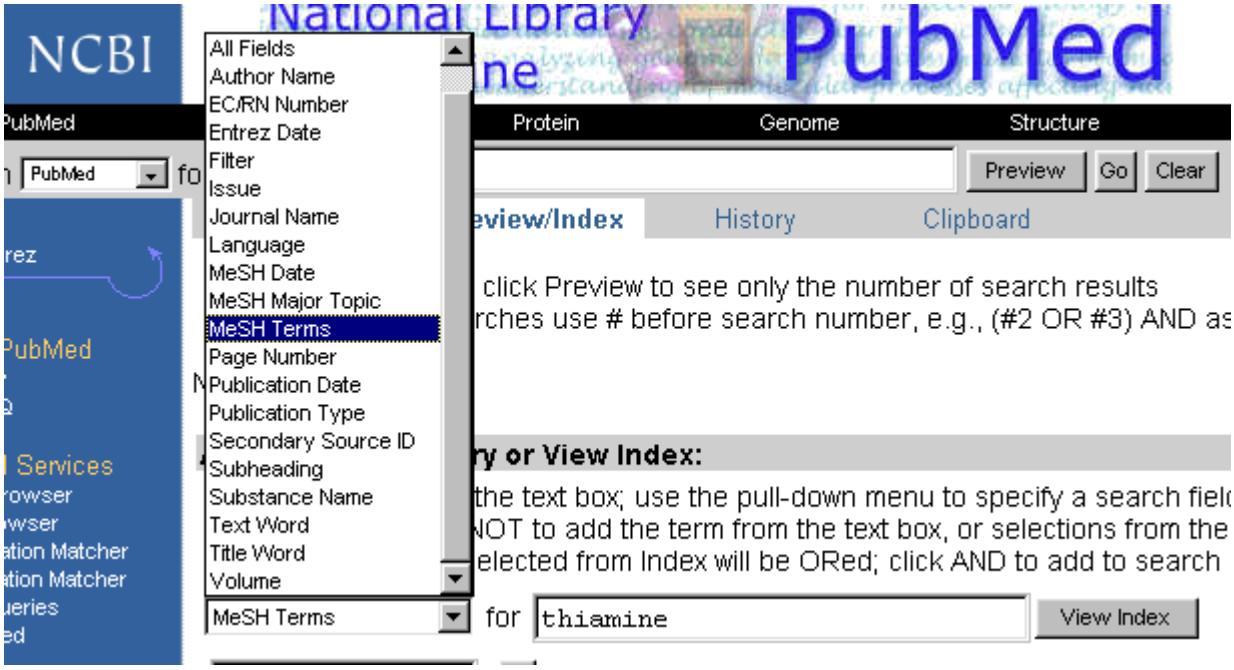
Use the Preview/Index feature to:

- Preview the number of search results before displaying the citations.
- Build search strategies by adding one or more terms one at a time.
- Add terms to a strategy from specific search fields.

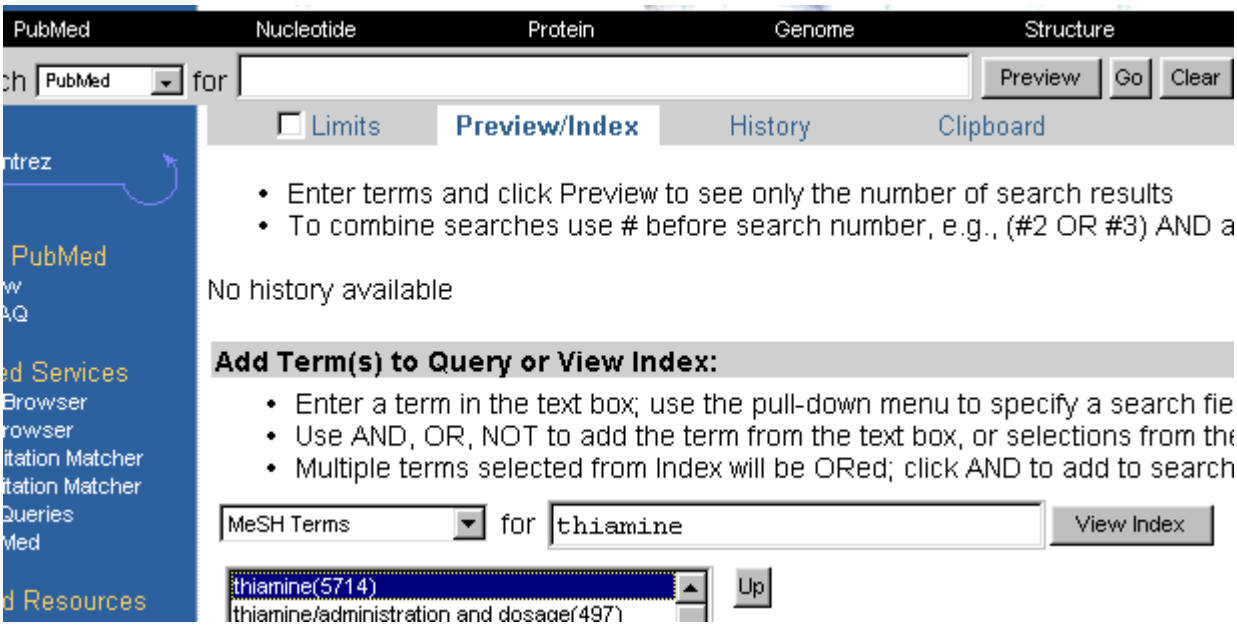
- View and select terms from the Index to build search strategies.
- View your search strategy as you continue to refine your search.

1. Click on "PreviewIndex."

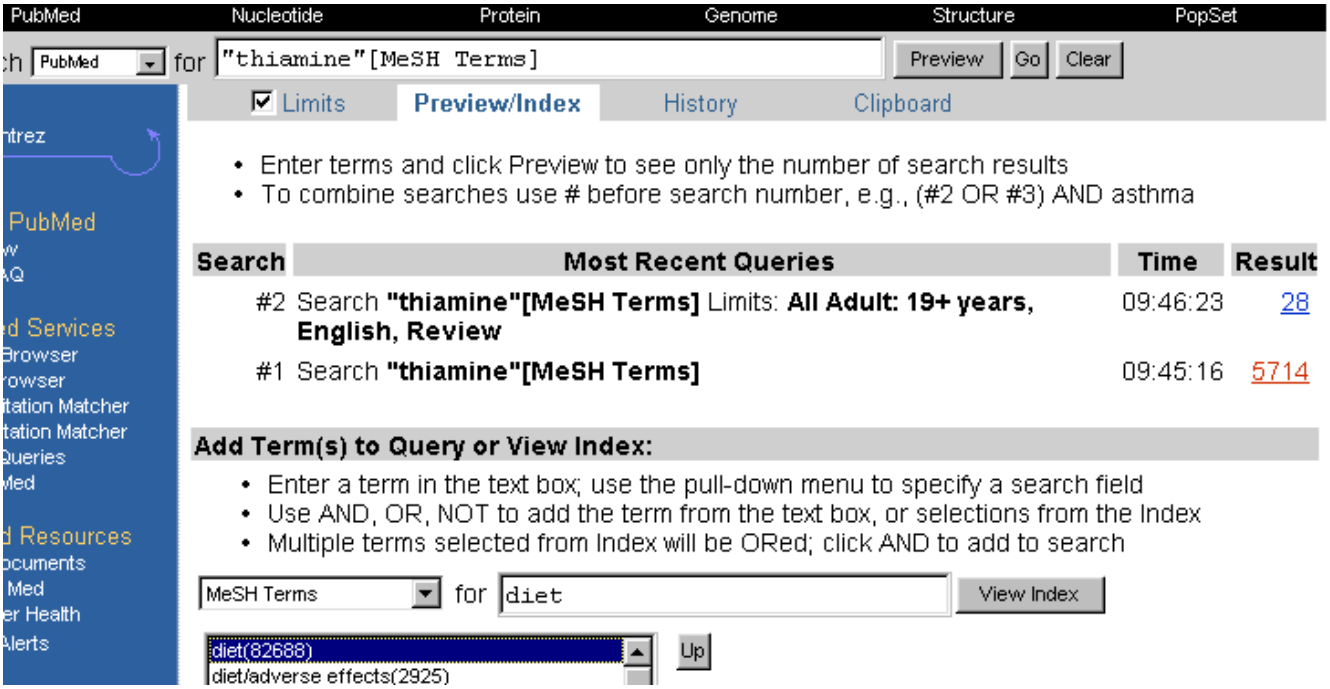
2. Choose an index field to be searched by clicking on the down arrow in the box that says "All Fields" i.e. "MeSH terms."



3. Type term in the box, i.e. "thiamine." Click "View Index" button.
4. Highlight the term to be searched by clicking on it in the display box.

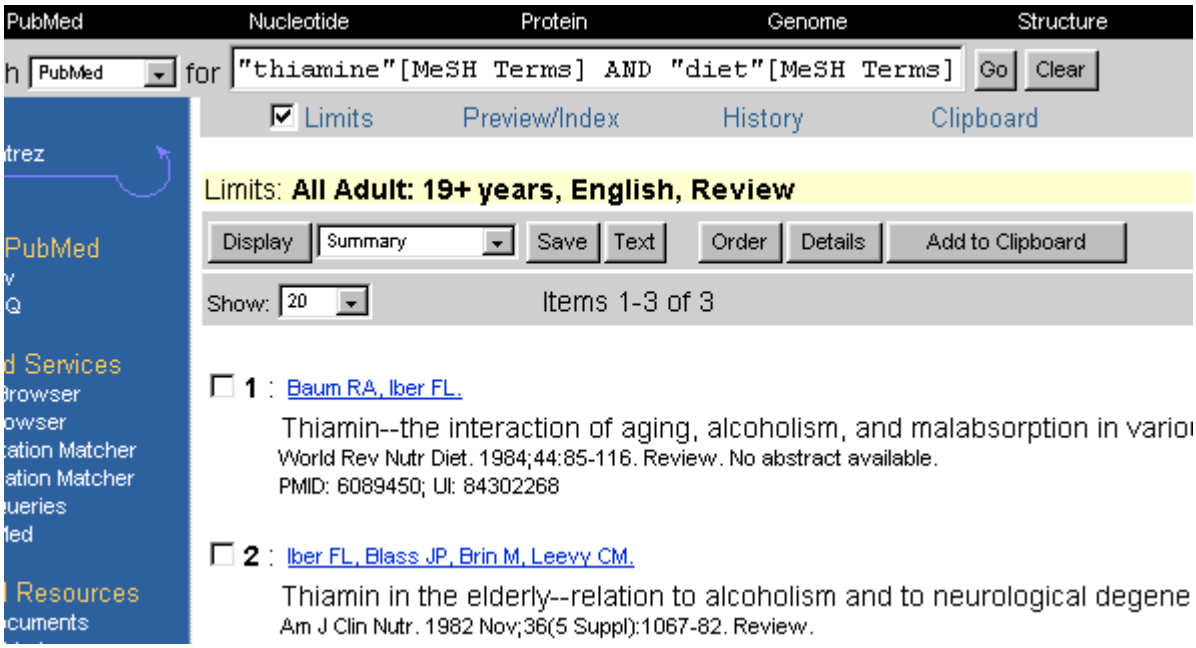


5. To paste the term into the search box, click one of the Boolean operand buttons (AND, OR, NOT).
6. To perform the search, click on"Go" To see a preview of search results, click on "Preview"
7. To add another term (that will be combined with the previous term according to which button you clicked in step 6), repeat steps 3 – 6.



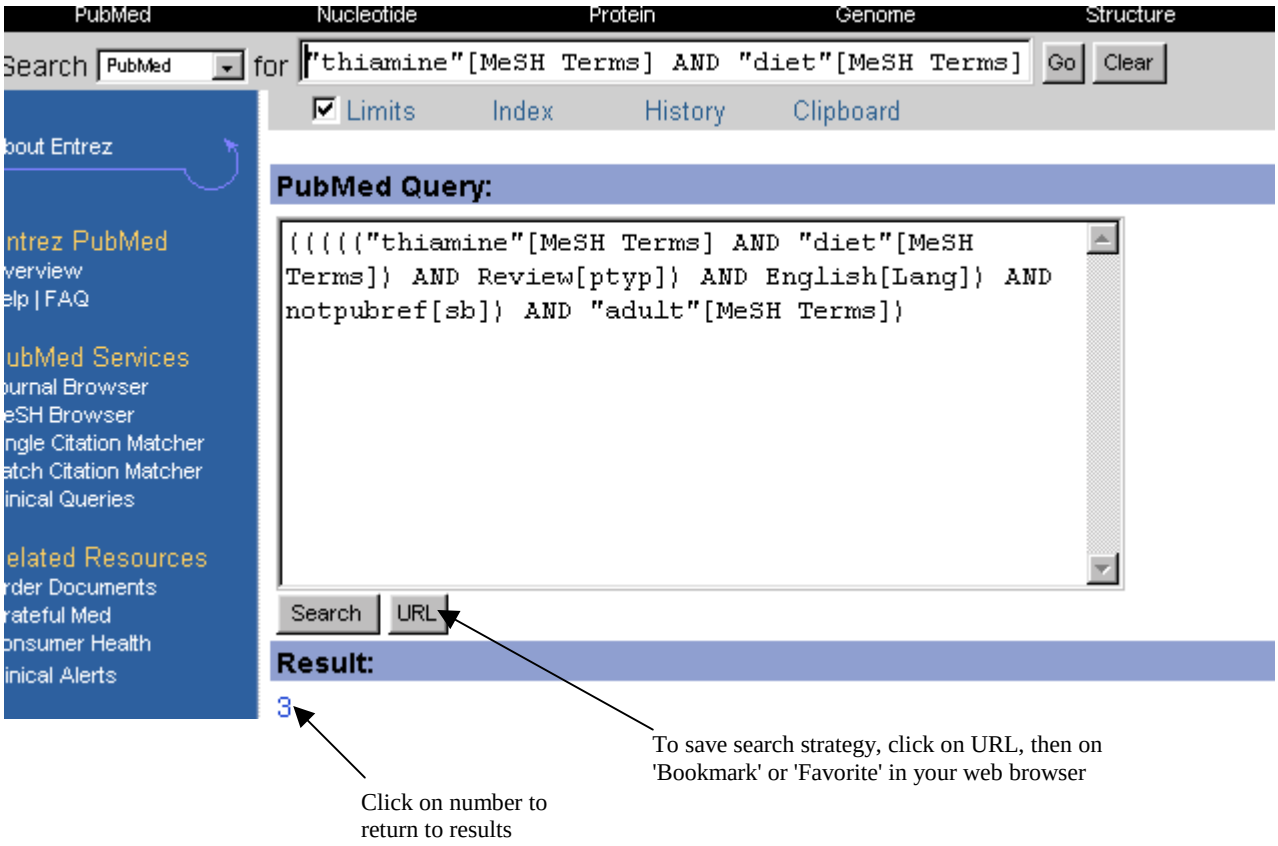
8. When you have selected/combined all terms, click "Go" to perform your search.

PubMed will display your search results: the query box displays your search terms as you entered them. Add or eliminat terms in the query box to modify your current search, or use "Details." If you applied Limits, there will be a check in the box next to and a listing of your limit selections will display, e.g., Limit: **All Adult:19+ years, English, Review**. To turn off the existing limits, click on the check-box to remove the check before running your next search.



Details

Details lets you view your search strategy as it was translated using PubMed's search rules and syntax. From Details, you can also save the search strategy or edit the search strategy and resubmit it. Details also contains error messages and notes. The Result number is a hyperlink displays the total number of matches for the current search. To return to the current search results screen, click this link or use the "Back" function of your Web browser.



Saving a Search Strategy from Details

Use the “URL” button to display the current search strategy as a URL and then bookmark the URL for future use as a current awareness search. To do this:

1. Click on “URL.” PubMed will return to the search results screen. The translated search strategy will be displayed in the query box and this search strategy will also be embedded as part of the URL.
2. Next, use your Web browser's bookmark function to save the URL as a bookmark (Netscape) or favorite (Internet Explorer).

Executing a Saved Search

1. Open your browser.
2. Execute the search weekly or monthly by opening the bookmark or favorite.

History

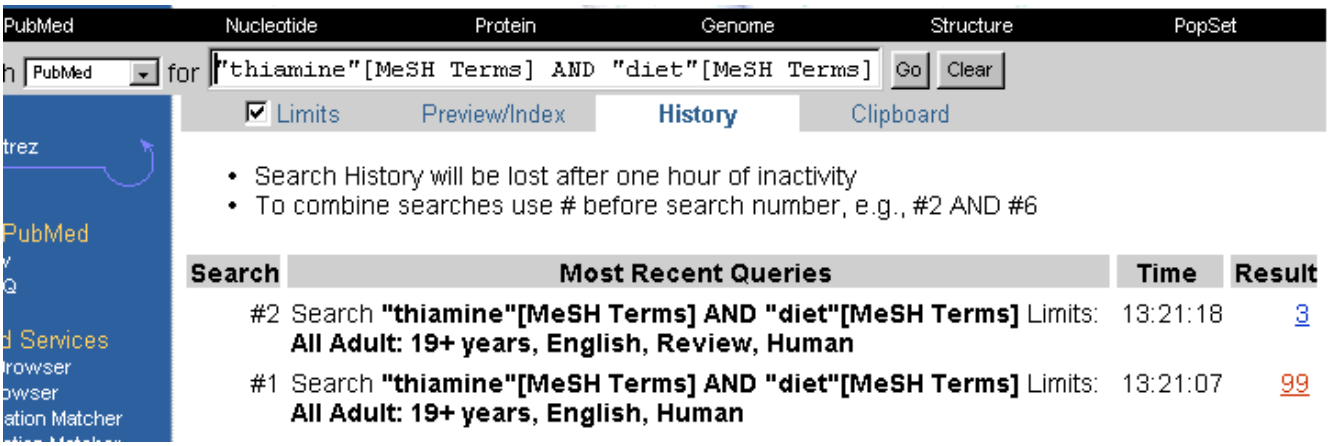
PubMed will hold all your search strategies and results in “History.” The History is only available after you run your first search. The History lists and numbers your searches in the order in which you run

them. The History screen displays your search query, the time of search, and the number of citations in your results. To view the results from a search, click on the number of results.

You can combine searches or add additional terms to an existing search by using the pound sign (#) before the search number, e.g., #2 AND #6, or #3 AND drug therapy. Once you have entered a revised search strategy in the query box, click Go to view the search results. To view the History after running a new search, click History from the Features bar. Click Clear History to remove all searches from the History screen.

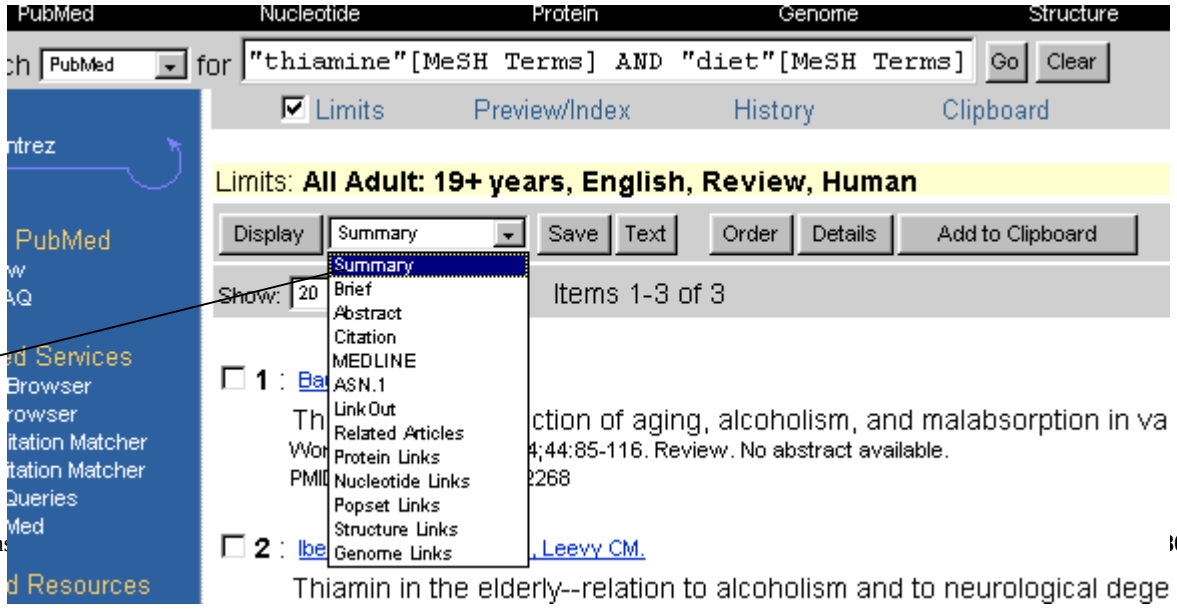
Notes:

1. The maximum number of queries held in History is 100. Once the maximum number is reached, PubMed will remove the oldest search from the History to add the most current search.
2. The Search History will be lost after one hour of inactivity on PubMed or any of the other Entrez databases.
3. PubMed will move a search statement number to the top of the History if the new search is the same as a previous search.
4. A separate Search History will be kept for each of the Entrez databases although the search statement numbers will be assigned sequentially for all databases.



Viewing Citations

To view citations with abstracts, choose “Abstract” from the drop down box, then click “Display.”



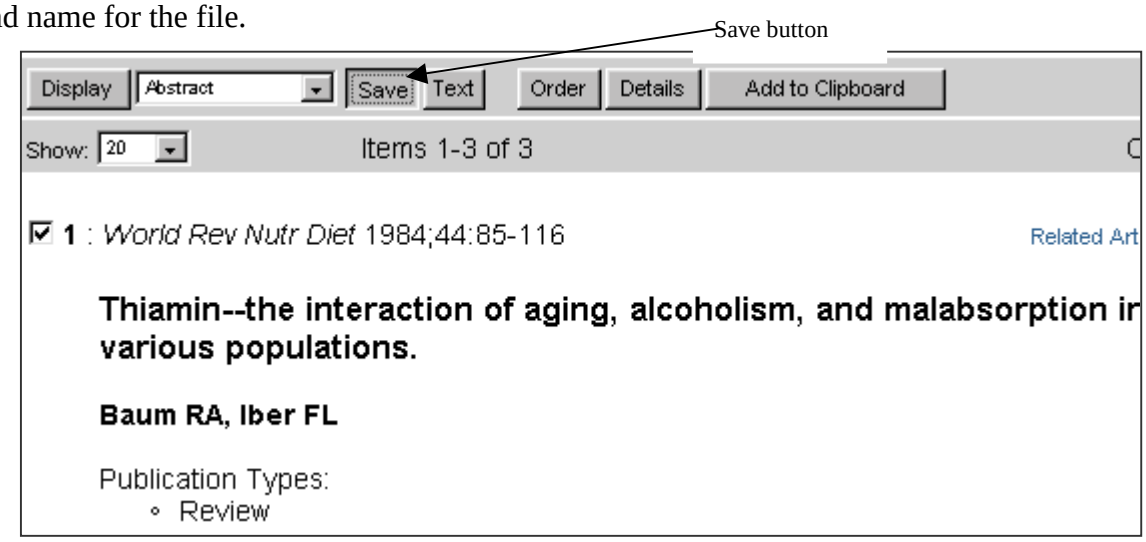
List of different display fomats for viewing citations

Printing Citations

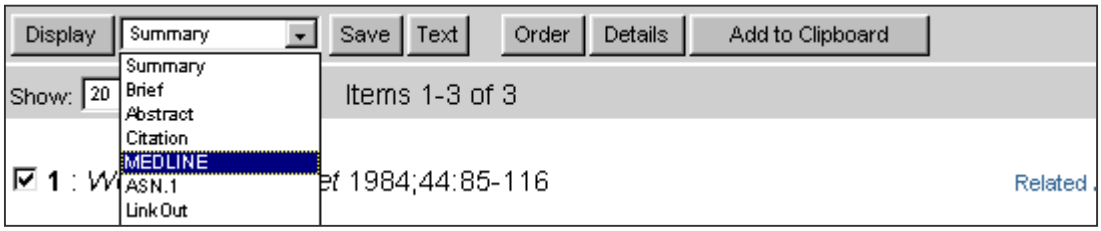
To print citations, use your browser's print function to print the page.

Saving Citations

To save citations, click the "Save" button. A dialog box will appear for you to indicate the drive, path and name for the file.

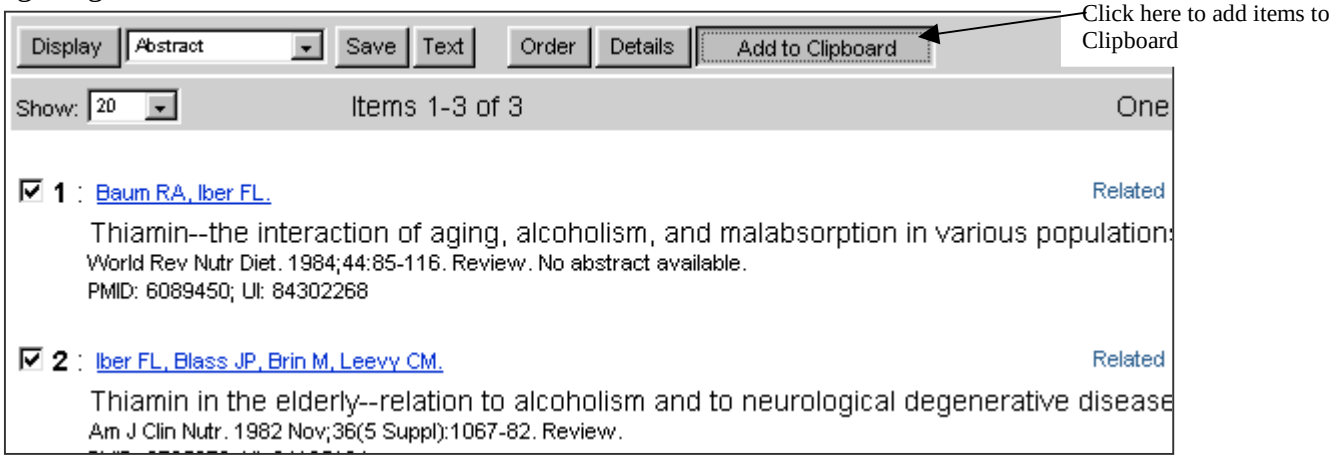


For downloading into bibliographic management software, select "MEDLINE" format which will tag the fields within the citation, then click "Save."

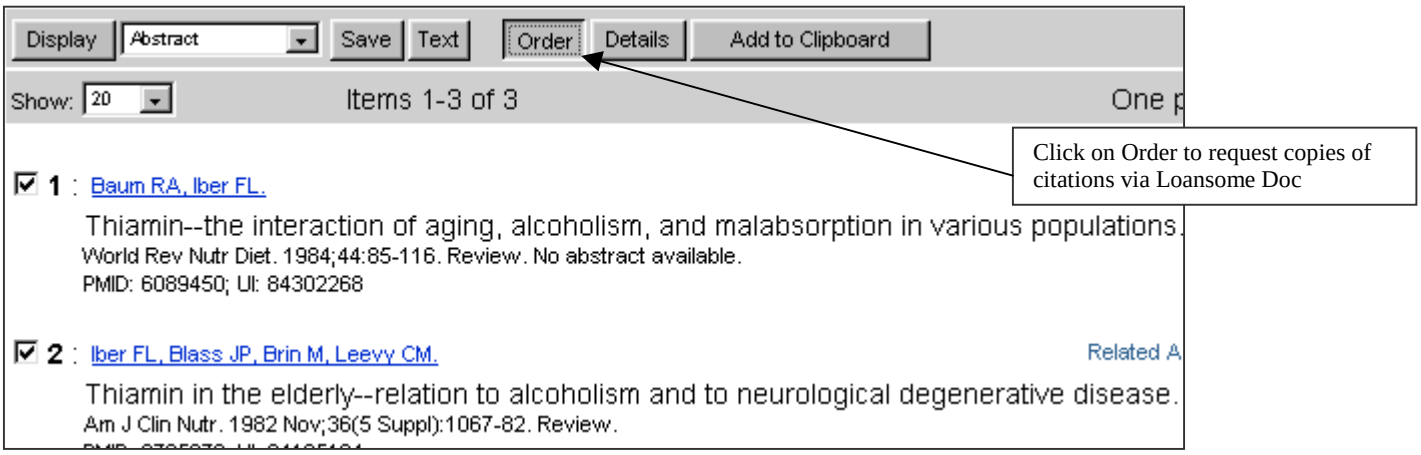


Add to Clipboard

You may hold citations from several searches in one place temporarily until you print, save, or order them. Mark citations by clicking in the box to the left, then click "Add to Clipboard" (if you don't mark individual citations, the system will add all search results to the clipboard). The maximum number of items that can be placed in the Clipboard is 500. (The Clipboard will be cleared after one hour of inactivity.) Once you have added a citation to the Clipboard, the record number color will change to green.



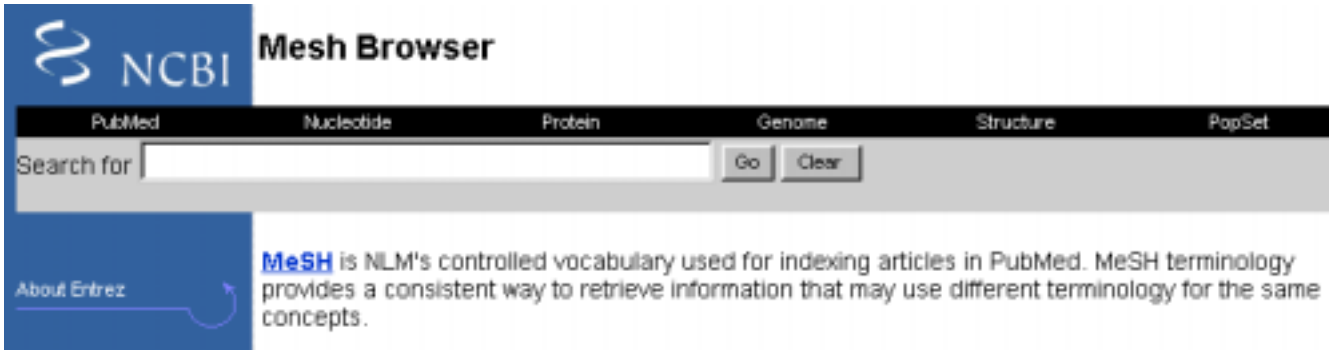
If you would like document delivery of articles, click "order" to request citations via the **Loansome Doc** service. If you have not registered for Loansome Doc, please do so at http://nihlibrary.nih.gov/Forms/LoansomeDoc_Form.html. Limit of 10 document orders per day.



Other PubMed Services

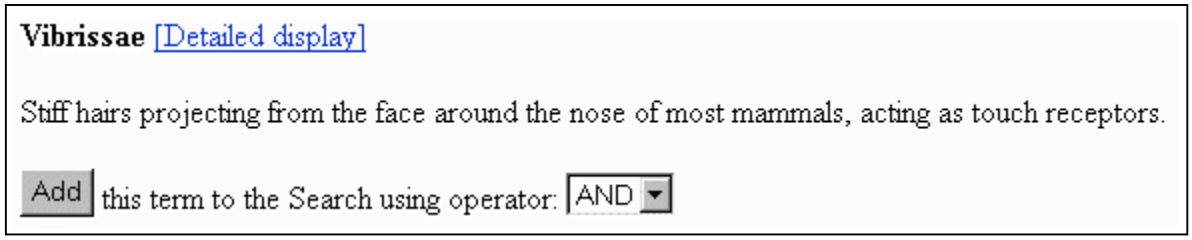
MeSH Browser

This Browser displays MeSH terms in a hierarchical structure and lets users select terms for searching. In addition, users can add subheadings and limit terms to a MeSH Major Term. If you enter a term that is not a valid MeSH term, the MeSH Browser will check the term against the MeSH Mappings and display the associated MeSH terms.

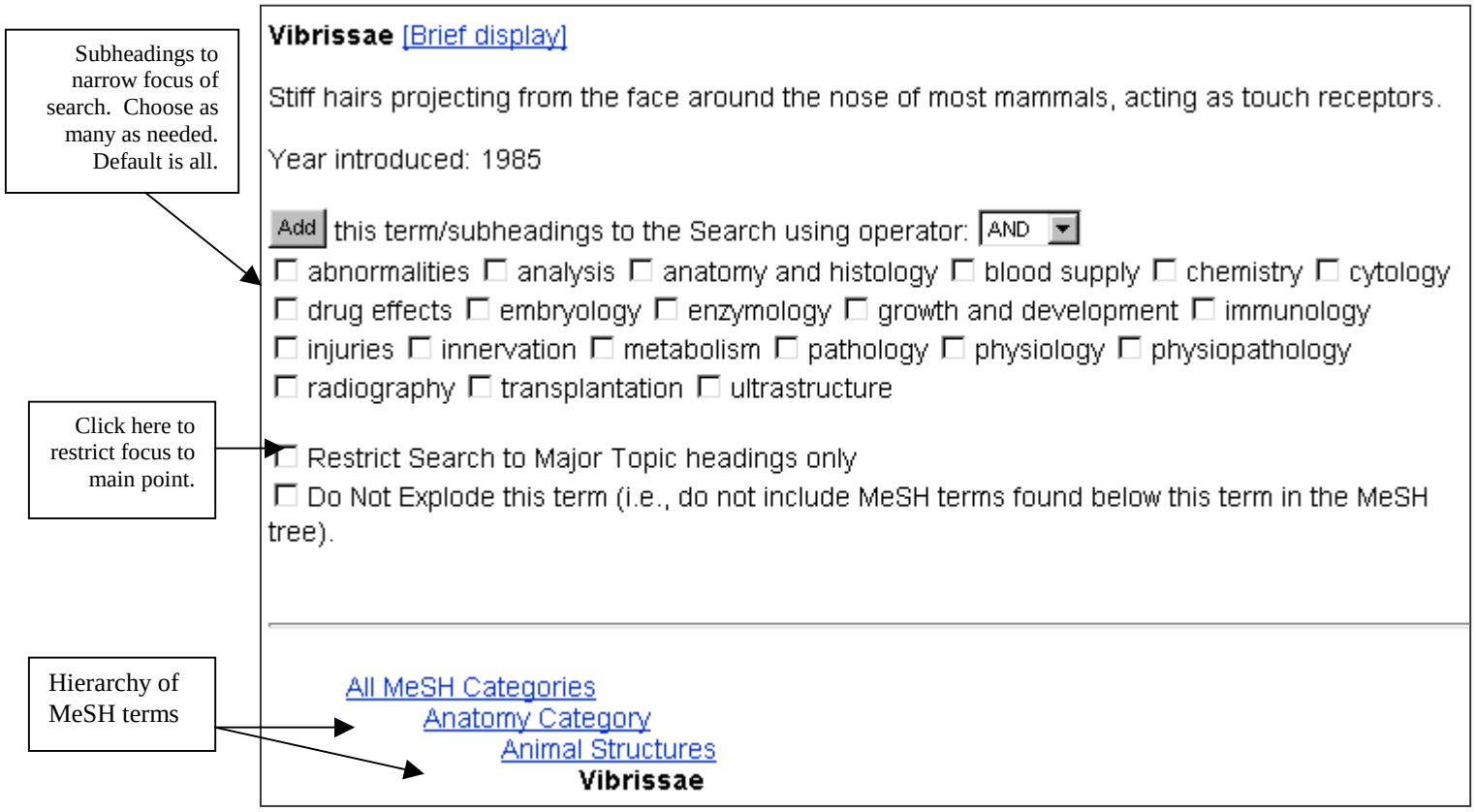


1. Type term in search box, click "Go."

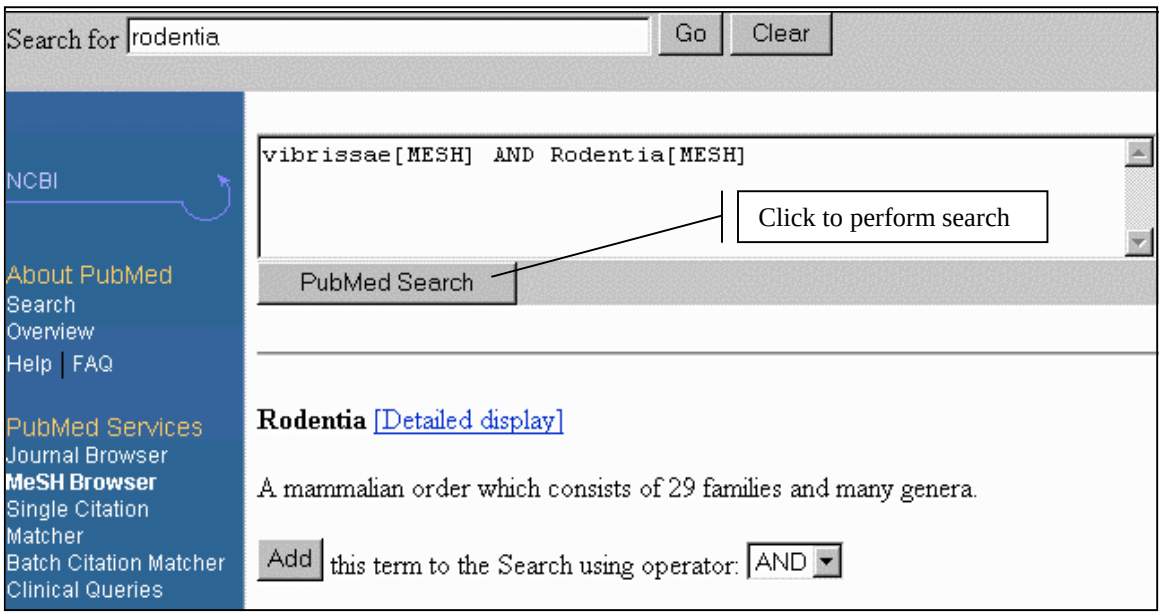
2. If the term is not a valid MeSH heading, you will be asked to select one by highlighting a term and clicking "Browse Term."
3. The term and its definition will be displayed.



4. Click on [Deailed Display] to see hierarchy, possible subheadings and to restrict term to major.



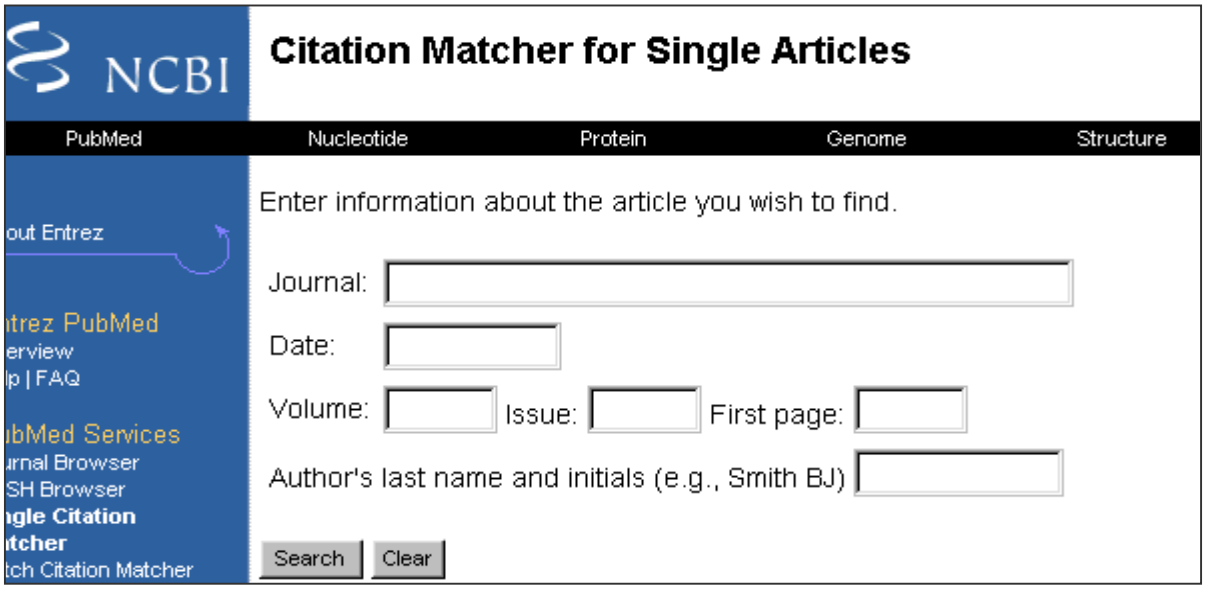
5. To search the term, click "Add" this term. An expanded search box will be displayed. Multiple terms may be browsed and added to the search statement using AND, OR or NOT. When all terms have been chosen and added, click "PubMed Search" to search the terms in the database.



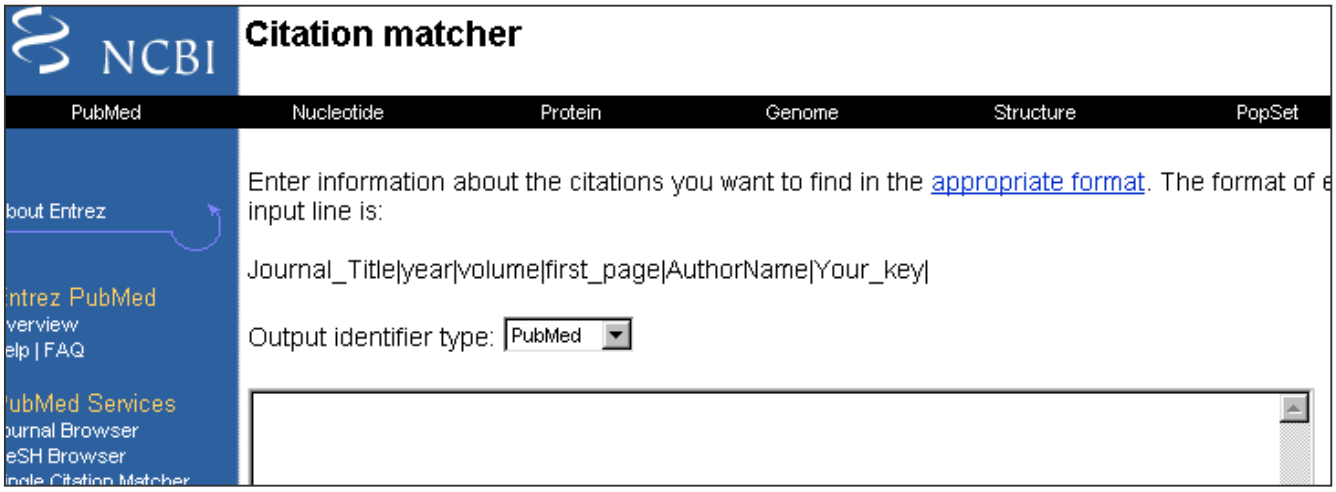
Citation Matcher

The Citation Matcher options allow you to bibliographic information to find the citation or the PubMed ID of any article in the PubMed database.

- **Single Citation Matcher** to look for a single citation. This feature is a fill-in-the-blank form that allows users to enter journal citation information to locate a record for a specific single article, or items indexed from a particular volume or issue of a journal. You do not have to fill in all the blanks.



- **Batch Citation Matcher** allows you to retrieve the PubMed IDs for many articles all at once. This feature requires that you enter the bibliographic information (journal, volume, page, etc.) in a specific format.



- If a single citation is not found, the UID field will contain one of the following:
  - INVALID_JOURNAL -- The Journal Name you specified is not a known abbreviation. See the PubMed Journal List (http://www.ncbi.nlm.nih.gov/PubMed/Journals/) to find the correct abbreviation for your journal.
  - NOT_FOUND -- The Journal name is valid, but the rest of the citation information did not match.

- AMBIGUOUS -- The information given matches more than one citation. You may be able to find out which citation is the true one by using the Citation Matcher for Single Articles (http://www.ncbi.nlm.nih.gov/htbin-post/PubMed/wgetcit), which will list the citations matched, unless there are too many.

Input example:

```
PROC NATL ACAD SCI U S A|1991|88|3248|MANN BJ|P32022-1|
PROC NATL ACAD SCI U S A|1991|88|8602|ALDERSON A|Q02723-1|
PROC NATL ACAD SCI U S A|1992|89|10169|CHEN YP|P05106-14|
PROC NATL ACAD SCI U S A|1992|89|3271|GOULD SE|P26261-1|
PROC NATL ACAD SCI U S A|1999|89|3271|GOULD SE|P26261-1|
```

Output for this input:

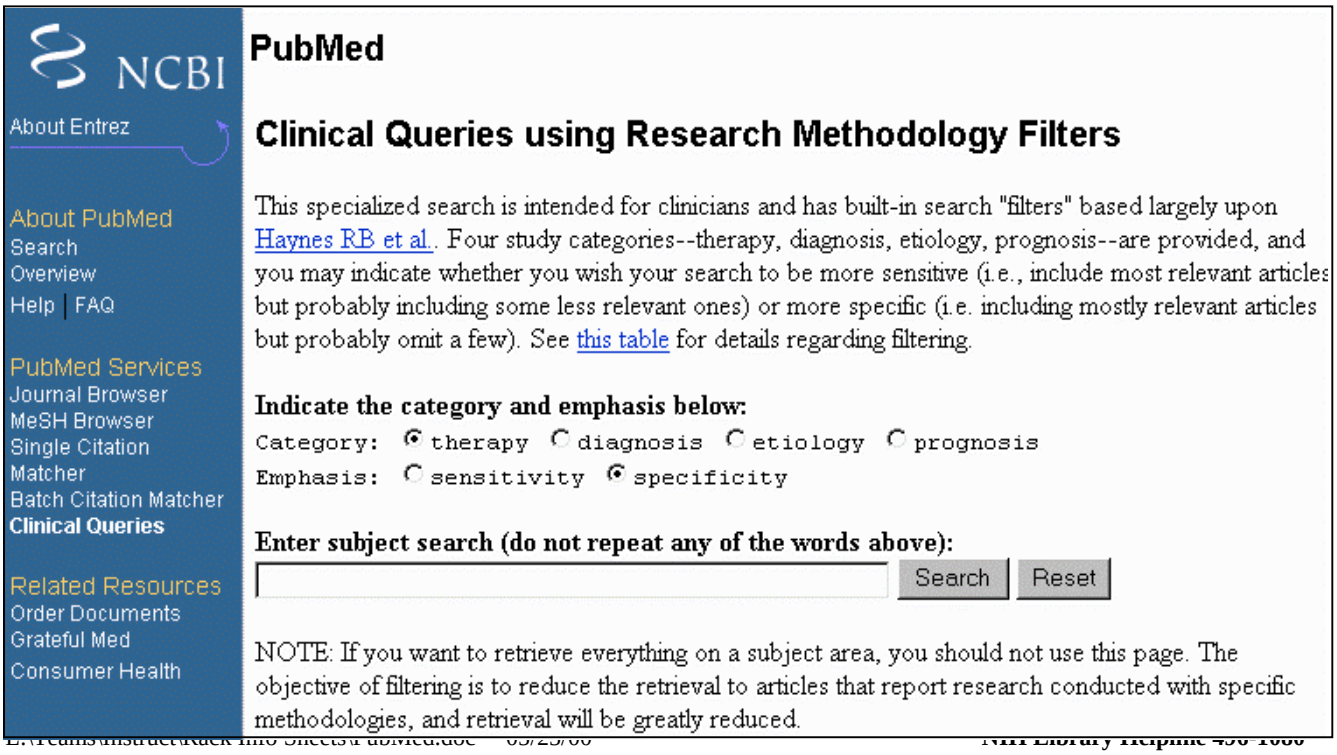
```
PROC NATL ACAD SCI U S A|1991|88|3248|MANN BJ|P32022-1|91195330
PROC NATL ACAD SCI U S A|1991|88|8602|ALDERSON A|Q02723-1|92020901
PROC NATL ACAD SCI U S A|1992|89|10169|CHEN YP|P05106-14|93066201
PROC NATL ACAD SCI U S A|1992|89|3271|GOULD SE|P26261-1|92228766
PROC NATL ACAD SCI U S A|1999|89|3271|GOULD SE|P26261-1|NOT_FOUND
```

- If you wish to match citations in bulk by e-mail, send email to citation_matcher@ncbi.nlm.nih.gov. For instructions, send an message which is empty except for the word "help" in the subject or body.

Clinical Queries

Clinical Queries mode uses stored strategies called Research Methodology Filters to facilitate evidence based medicine searching. You can precisely locate clinical articles on **therapy**, **diagnosis**, **etiology**, or **prognosis** and can control the breadth or specificity of retrieval. As retrieval is greatly reduced, only use this mode if you are looking for research conducted with specific methodologies. Do not use Clinical Queries mode if you are looking for comprehensive retrieval of all references on a subject.

Clinical Queries Mode is available as a link from the navigation bar on the left.

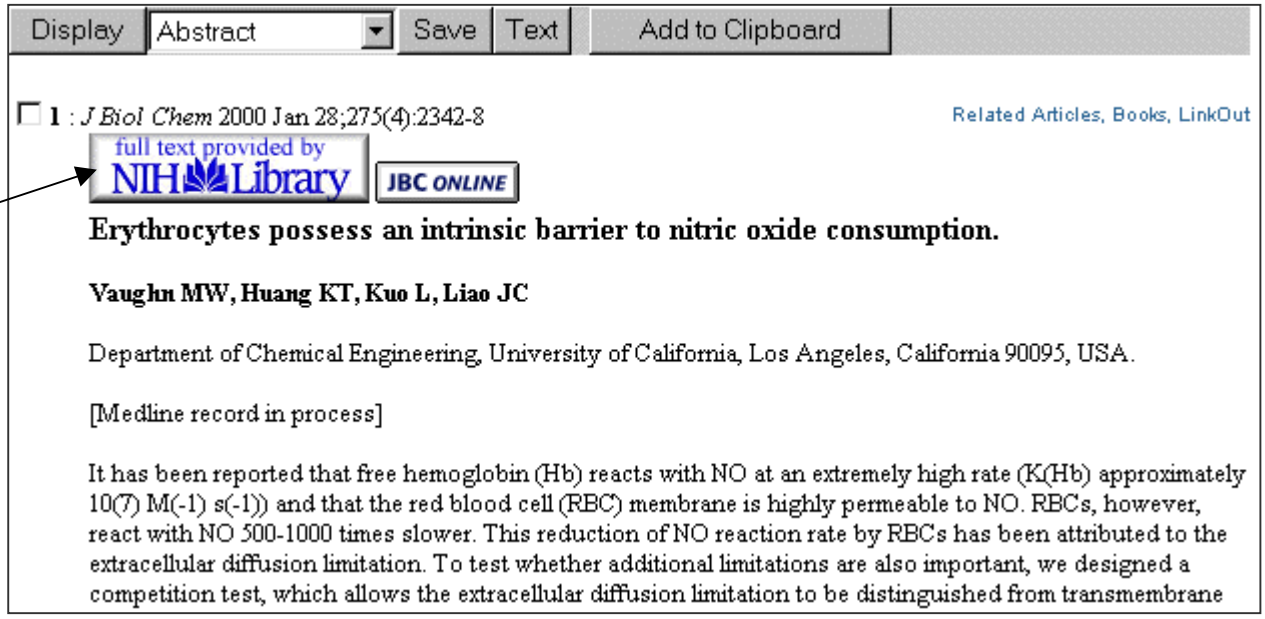


LinkOut

This is a service that provides links from PubMed citations to full-text journal articles, biological data, sequence centers, etc. Third parties provide a URL, resource name, brief description of their web site, and then PubMed creates the links to their site.

LinkOut provides access for NIH staff to **full-text articles** from PubMed courtesy of NIH Library licenses. The **NIH Library button** on a PubMed record indicates that NIH has full-text access privileges for the journal. In this example, the NIH Library button links to the article in *J Biol Chem*. For the full-text, you must access the Internet via an **NIH IP address**: call the Center for Information Technology at 594-6248 to obtain a Parachute account for access from home.

NIH Staff can access the full text of the article by clicking on this button



Other Resources or NCBI Databases

Links to other resources or NCBI databases are available from the buttons to the right of each citation. The following links are available:

Protein - Amino acid (protein) sequences from Swiss-Prot, PIR, PRF, PDB, and translated protein sequences from the DNA sequences databases.

Nucleotide - DNA sequences from GenBank, EMBL, and DDBJ.

PopSet - The PopSet database contains aligned sequences submitted as a set from a population, phylogenetic or mutation study describing such events as evolution and population variation.

Structure - The Molecular Modeling Database (MMDB) contains 3-dimensional structures determined by X-ray crystallography and NMR spectroscopy.

Genome - Provides access to records and graphic displays of entire genomes and chromosomes for megabase sequences obtained from large-scale sequencing of genomes and chromosomes.